

What is claimed is:

1. A micro power converter with multiple outputs, comprising:

a semiconductor substrate having a semiconductor integrated circuit,

5 a plurality of thin film magnetic induction components electrically connected to the semiconductor integrated circuit and having a plurality of the magnetic insulation substrates, said plurality of thin film magnetic induction components being spaced apart from each other with a gap therebetween, and

10 a capacitor electrically connected to the semiconductor integrated circuit.

2. A micro power converter according to claim 1, further comprising a magnetic isolation layer disposed in the gap  
15 between the magnetic insulation substrates for magnetically isolating the thin film magnetic induction components.

3. A micro power converter according to claim 1, wherein each of said thin film magnetic induction components includes one of  
20 said magnetic insulation substrates, a coil conductor formed on the one magnetic insulation substrate, and a plurality of connection terminals formed at a peripheral portion of said one magnetic insulation substrate, said plurality of the thin film magnetic induction components being arranged with the gap and  
25 attached at the plurality of the connection terminals.

4. A micro power converter according to claim 1, wherein said plurality of the magnetic insulation substrates is formed of a ferrite substrate.

5. A micro power converter according to claim 2, wherein said magnetic isolation layer is formed of a non-magnetic material.

6. A micro power converter according to claim 5, wherein said  
5 non-magnetic material is a resin material.

7. A micro power converter according to claim 5, wherein said non-magnetic material is a ceramic material.

10 8. A micro power converter according to claim 3, wherein said plurality of the connection terminals is formed on each of the plurality of the magnetic insulation substrates at same planar positions, said plurality of the connection terminals connected to two ends of each coil inductor and located on one magnetic  
15 insulation substrate being located at planar positions different from those of another magnetic insulation substrate.

9. A micro power converter according to claim 8, wherein one of said plurality of the connection terminals formed on one  
20 magnetic insulation substrate faces another magnetic insulation substrate, and has a height greater than that of the coil conductor formed on the one magnetic insulation substrate.

10. A micro power converter according to claim 3, wherein said  
25 plurality of the connection terminals includes a first terminal formed on a front surface of one magnetic insulation substrate and a second terminal formed on a rear surface of the one magnetic insulation substrate, said first terminal being electrically connected to the second terminal through a hole  
30 formed in the one magnetic insulation substrate.

11. A micro power converter according to claim 10, wherein said semiconductor substrate is electrically connected to the first terminal.

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12. A micro power converter according to claim 10, wherein said capacitor is electrically connected to the first terminal.